EXHIBIT S

Soil Remediation Report
Former Chromal Plating Company Site
Former Lawry's California Center
Los Angeles, California
Case File No. 95-094
CAO No. 99-037

November 23, 1999
LFR 6257.00-312

VOLUME I
Text, Tables, and Figures

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Ms. Ana Veloz-Townsend
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, California 90013

Subject: Soil Remediation Report, Former Chromal Plating Site, Former Lawry's California Center, 528 San Fernando Road, Los Angeles, California
Case File No. 95-094
CAO No. 99-037

Dear Ms. Veloz-Townsend:

On behalf of the Qualified Settlement Fund, LFR Levine · Fricke (LFR) has prepared the enclosed Soil Remediation Report for the former Chromal Plating Company site at the former Lawry's California Center. The Soil Remediation Report contains a description of the in situ soil stabilization activities recently completed at the site, analytical results of confirmation samples collected from the treated soil, and analytical results and disposal documentation for the overburden soil generated during the soil remediation. This report also serves as the third quarter 1999 Progress Report since the only activities that occurred during the third quarter of 1999 were the soil remediation activities. Approval for combining the two reports was granted by Regional Water Quality Control Board staff in their October 15, 1999 letter.

Analytical results for confirmation samples indicate that the in situ stabilization was successful in converting the toxic and mobile hexavalent form of chromium into the much less toxic and immobile trivalent form of chromium and isolating the chromium-affected soils in a low-permeability block of stabilized soil. A total of 74 confirmation samples was collected from the treated soil and analyzed for total chromium, hexavalent chromium, and leachable chromium. Analytical results for all of the treated soil confirmation samples were below the cleanup levels established by the RWQCB. Selected treated soil samples were also analyzed for unconfined compressive strength. The samples analyzed met the 7-day and 28-day strength criteria specified for the project. An asphalt cap was placed over the stabilized soil to limit potential leaching of residual amounts of chromium into the groundwater. A groundwater-monitoring program is in place in accordance with the Cleanup and Abatement Order (No. 99-037) requirement to confirm that the existing groundwater plume continues to decrease in size and concentration.

Based on these results, LFR recommends that the RWQCB grant closure on all issues pertaining to soil contamination at the site. Closure on groundwater will be requested based on the results of future groundwater monitoring. If you have any questions or comments, please call either of the undersigned at (949) 955-1390.

Sincerely,

Jennifer S. Rothman, P.E.
Senior Project Civil Engineer

Eileen T. Wintemute
Vice President, Principal Engineer

Attachments

cc: B. Edelson P.E. - Qualified Settlement Fund
D. Smith, Esq. - Unilever
G. Costello, Esq. - Caltrans
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S. Nagy - Lipton Co.

CONTENTS

FIGURES

APPENDICES

1.0 INTRODUCTION

1.1 Site Description

The former Lawry's California Center is located at 570 West Avenue 26, Los Angeles, California. The Lawry's California Center comprised a 17-acre parcel that was at one time developed with a total of 17 buildings, including warehouses, general office facilities, former food processing facilities and restaurants, landscaped courtyards, and parking areas (Figures 1 and 2). The buildings have recently been demolished in preparation for a Home Depot store that is currently being constructed on the property. The former Chromal site (the "Site") consists of a 4,500-square-foot former asphalt parking area located in the southern portion of the former Lawry's California Center property, at 528 San Fernando Road near Figueroa Avenue (Figure 2).

1.2 Site History

The Chromal Plating Company, a commercial plating facility, occupied the Site from about 1940 to about 1960. As part of a general file search, LFR reviewed historical aerial photographs and Sanborn Fire Insurance maps from 1920, 1950, and 1970. A review of the 1920 Sanborn map indicates that residential dwellings occupied the site. The 1950 map indicates that the Chromal Plating Company occupied the site at that time. A 1960 aerial photograph reviewed by LFR shows the former Chromal Site buildings demolished.

In 1959, the northern portion of the Chromal site was transferred to the State of California (Caltrans). Ownership of the southern portion of the Site was subsequently transferred to Conopco, Inc., which then used the property as a parking lot for the former Lawry's California Center. In late 1998, ownership of the southern portion of the Site was transferred from Conopco, Inc. to Nadler Cypress Holdings LLC.

1.3 Project Objective and General Scope of Work

The objective of this project was to reduce to acceptable levels the environmental threats associated with the presence of hexavalent chromium in soils beneath the Chromal site. This objective was achieved through an in situ soil mixing process in which ferrous sulfate was mixed with site soils to reduce hexavalent chromium concentrations, and cement was then added to stabilize the treated soil mixture.

The scope of work for the soil remediation was described in LFR's Remedial Action Plan dated September 14, 1998 and approved by the RWQCB on October 21, 1998. A Cleanup and Abatement Order (CAO No. 99-037) was issued by the RWQCB on May 28, 1999. The following is a summary of the general scope of work performed for this project. A detailed discussion of field activities is presented in subsequent sections of this report.

1) Site Preparation

   - site security fencing (accomplished by Home Depot's contractor)
   - removal and off-site disposal of existing planters, light posts, and asphalt paving from the soil mixing area and equipment staging area (accomplished by Home Depot's contractor)
   - excavation and stockpiling of the top 5 feet of soils located under or within 5 feet of the freeway overpass

2) Soil Mixing Process

   - two-pass (treatment and then stabilization) soil mixing process
     - chromium-affected soils treated with a ferrous sulfate slurry to convert hexavalent chromium into trivalent chromium
     - treated soils stabilized with cement

3) Confirmation Sampling

   - collection and analysis of samples from treated soils for use in confirming that treatment criteria have been achieved

4) Capping of Treatment Area

   - placement of an asphalt cap over the stabilized soil to limit potential leaching of residual amounts of chromium into groundwater

5) Disposal of Excess Soils

   - transportation and disposal of excess treated soils and overburden soil from Area A

2.0 REMEDIAL GOALS

The following remedial goals were developed for this project and approved by the RWQCB in a letter dated June 4, 1999:

- Hexavalent chromium concentration less than 10 milligrams per kilogram (mg/kg)
- Modified California Waste Extraction Test (WET; using deionized water) results for hexavalent chromium less than 1 milligram per liter (mg/l)
- Toxicity Characteristic Leaching Procedure (TCLP) results for total chromium less than 5 mg/l

- California WET results for total chromium less than 560 mg/l

In addition, the following strength criteria were developed by LFR for the project:

- Unconfined compressive strength greater than 7 pounds per square inch (psi) after a 7-day cure time and greater than 14 psi after a 28-day cure time

3.0 FIELD ACTIVITIES

3.1 Site Preparation

Temporary chain link fencing was installed to enclose and protect the work area, including materials, waste storage areas, and work-related equipment. Existing planters and asphalt pavement were removed as necessary to perform soil mixing in the treatment area shown on Figure 3. Asphalt and soil generated during the site preparation work were stockpiled on site and sampled for profiling and off-site disposal.

Some of the soils requiring treatment and stabilization were beneath the freeway overpass, which limited overhead access. Soils located in this area were excavated by the remediation contractor, Raito Inc. (Raito) to a vertical depth of 5 feet below ground surface (bgs) prior to commencing the in situ soil mixing process. Excavated soils from this work were stockpiled on-site and covered with visqueen. Soil samples were collected from the stockpile for profiling and off-site disposal.

The following measures were taken by Raito to prevent off-site discharges of liquids, dust, or other materials from the Site:

- construction of berms to contain and prevent liquid discharge associated with the soil mixing process
- appropriate placement and covering with visqueen of stockpiled soils
- dust suppression using a water truck

No off-site discharges were noted or are believed to have occurred.

3.2 Air Monitoring

Two phases of personal air monitoring were performed by Raito's safety consultant, EOS Environmental, Inc. of South Pasadena, California. The first phase was performed at the beginning of field activities (June 30, 1999 through August 2, 1999). The second phase was performed following the completion of Area A treatment during the first week of Areas B and C treatment (July 27, 1999 through July 29, 1999).

Personal sampling pumps were worn by Raito personnel working in both the exclusion zone and support zone. Personal breathing zone samples were taken during normal work shifts to determine the Time Weighted Average of worker exposure. Sampling activities included the collection of personal air samples using PVC filter media. Following collection, samples were taken to EMS Laboratories for analysis. Samples were analyzed using NIOSH method 7600. Laboratory results indicate that permissible exposure limits for hexavalent chromium were not exceeded. Copies of EOS Environmental's Air Monitoring Reports are presented in Appendix A.

3.3 In Situ Soil Mixing

3.3.1 Extent of Soils Treated and Stabilized

The extent of soils that were treated and stabilized is shown on Figure 3. The soil mixing work was divided into three primary areas:

1) Soils located under or within 5 feet horizontally of the freeway overpass (Area A).

2) Soils not located within 5 feet horizontally of the freeway overpass and treated and stabilized to a depth of 41 feet below ground surface (Area B).

3) Soils not located within 5 feet horizontally of the freeway overpass and treated and stabilized to a depth of 10 feet below ground surface (Area C).

The quantities of soil that were treated and stabilized in these areas are presented below:

Area	Description	Areal Extent	Final Depth of Mixing	In-place Volume
A	Soils under or within 5 feet of freeway overpass	1,150 sf	36 feet	1,533 cy
B	Soils not within 5 feet of freeway overpass	2,840 sf	41 feet	4,313 cy
C	Soils not within 5 feet of freeway overpass	2,230 sf	10 feet	826 cy
Total extent of soils treated and stabilized:		6,220 sf	10 to 41 feet	6,671 cy

Notes: Area = area designation shown on Figure 3
sf = square feet
cy = cubic yards
final depth of mixing = depth of soil mixing from surface after site preparation is complete

3.3.2 Soil Mixing Process

The in situ soil mixing consisted of a two-pass process of treatment and stabilization. The treatment pass consisted of the addition and mixing of ferrous sulfate reagent with designated soils. The stabilization pass consisted of the mixing of cement slurry with treated soils. Photographs showing the in situ soil mixing equipment and process are included in Appendix B.

Sequencing

The in situ soil mixing was performed with overlapping vertical borings to ensure that soils within the area delineated for remediation were treated. The sequencing was developed to provide adequate lateral support to nearby structures. A grid was set up and each borehole was identified by its proper grid location (i.e., B21). The grid and borehole layout is presented in Figure 4.

Mix Design

Raito used the following mix design:

First Pass:

Ferrous Sulfate: 158 pounds per cubic yard (lb/cy) of soil
Water: 395 lb/cy of soil

Second pass:

Cement: 252 lb/cy of soil
Water: 197 lb/cy of soil

On July 9, 1999 the cement was reduced from 252 lb/cy to 211 lb/cy. On July 26, 1999 the cement was reduced from 211 lb/cy to 169 lb/cy. Raito made these reductions because the compressive strength test results at 252 lb/cy and 211 lb/cy were much higher than the required 7 psi for 7 days and 14 psi for 28 days.

QA/QC Documentation

Raito's QA/QC program consisted of two stages: pre-production and production. Pre-production consisted of the initial set up and calibration of the equipment. Calibration forms are included in Appendix C. Production QA/QC consisted of the collection of information from the following areas: reagent mixing, alignment of the columns, rotation speed, depth, rate of penetration and withdrawal, reagent injection rate, summary of construction, and sampling and testing. Information was documented on daily QC Forms. These forms are included in Appendix C.

3.4 Confirmation Soil Sampling

Samples from treated soil columns were collected for use in confirming that the treatment criteria had been achieved. Confirmation samples were collected on a minimum frequency of one every 225 square feet of surface area treated or once per shift, whichever represented the higher frequency. Confirmation samples were collected using a PVC sample container attached to a beam. The beam was lowered into the selected borehole using an excavator. When the desired depth was reached, a plug on the sample container was opened and a sample of the treated soil was collected. The sample was lifted from the borehole with the excavator and emptied into a bucket. The sample was then placed in sample tubes for transport to the laboratory. Photographs showing the sampling procedure are included in Appendix B.

For each confirmation sampling location, samples were collected at two depths (5 and 30 feet bgs) for the deeper soil mixing areas (Areas A and B) and at one depth (5 feet bgs) for the 10-foot-depth soil mixing area (Area C). The samples were labeled with a description of the depth, location, date, and time. Samples were transported to Severn Trent Laboratories (STL; formerly Core Laboratories), Anaheim, California, via courier under strict chain-of-custody protocol.

A total of 74 confirmation soil samples were collected and analyzed. Confirmation soil sample locations are shown on Figure 4. The following analyses were performed on all confirmation samples by STL:

- Hexavalent chromium (solid) by EPA Method 7196
- Modified California WET (using deionized water) for hexavalent chromium
- California WET for total chromium
- TCLP for total chromium using EPA Method 6010B
- Total chromium (solid) by EPA Method 6010B

Analytical results for the confirmation samples are presented in Table 1. Analytical results for all of the treated soil confirmation samples were below the cleanup levels approved by the RWQCB. Laboratory reports and chain-of-custody documentation are presented in Appendix D.

Three treated soil samples were also analyzed for unconfined compressive strength by Smith-Emery GeoServices, Los Angeles, California. Samples were collected at the start of the treatment process and following a change in the design mix. Raito made two changes to the design mix during the project, both times reducing the amount of cement added. The samples were tested for 7-day and 28-day strength. All three samples met the strength criteria specified for the project. Unconfined compressive strength test results are included in Table 1 and Appendix D.

3.5 Asphalt Cap

Following in situ soil mixing activities, the treated soil was allowed to cure for 10 days. The top 2 feet of treated soil was then excavated from the treatment area in preparation for placement of imported fill material, base rock, and an asphalt cap. Excavated treated soil was stockpiled on-site with the excess treated material generated during soil mixing activities.

A.J. Padelford & Son Inc., Artesia, California, placed and compacted clean import fill material in the excavation. Schaefer's Parking Lot Service, Paramount, California, placed 4 inches of select base material over the fill material. A 3-inch thick asphalt cap was placed over the base (Figure 5). The purpose of the asphalt cap is to limit potential leaching of residual amounts of chromium into groundwater. The asphalt cap was sloped to provide drainage.

3.6 Off-Site Disposal of Soils

3.6.1 Excess Soils from Soil Mixing Work

Excess treated soils generated by both the soil mixing process and the post soil-mixing site rough grading were stockpiled on-site pending transportation to an approved off-site facility. Analytical results for the excess treated soil stockpile samples were submitted to the RWQCB under separate cover (November 5, 1999 and November 17, 1999 Submittal of Laboratory Data for WDR Permit Application). Excess treated soil will be transported as non-hazardous waste to Bradley Landfill, Sun Valley, California, by Cameron Environmental of Torrance, California. Non-hazardous waste data forms for the material will be submitted to the RWQCB under separate cover.

3.6.2 Soils Generated from Excavation in Vicinity of Freeway Overpass

Soils generated from the excavation in the vicinity of the freeway overpass were stockpiled on-site and sampled for profiling purposes. One sample was also collected from the stockpile of asphalt and soil removed as part of site preparation. Analytical results for the overburden soil stockpile samples are presented in Table 2. Approximately 333 tons of soil was transported by Cameron Environmental to Scholl Canyon Landfill. Disposal documentation for the overburden soil and asphalt is included in Appendix F.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Soil Issues

Analytical results for confirmation soil samples indicate that the in situ stabilization was successful in converting the toxic and mobile hexavalent form of chromium into the

much less toxic and immobile trivalent form of chromium and isolating the chromium-affected soils in a low-permeability block of stabilized soil. A total of 74 confirmation samples was collected from the treated soil and analyzed for total chromium, hexavalent chromium, and leachable chromium. Analytical results for all of the treated soil confirmation samples were below the cleanup levels approved by the RWQCB. Select treated soil samples were also analyzed for unconfined compressive strength. The samples analyzed met the 7-day and 28-day strength criteria specified for the project. An asphalt cap was placed over the stabilized soil to limit potential leaching of residual amounts of chromium into the groundwater.

As this remedial action requires essentially no active management, LFR recommends that the RWQCB grant closure for all issues pertaining to soil contamination at the Site.

Groundwater Issues

A groundwater-monitoring program is in place to confirm that the existing groundwater plume continues to decrease in size and concentration. The groundwater monitoring program, as outlined in the September 14, 1998 RAP and the May 28, 1999 CAO, consists of gauging and sampling the following wells: LFCH-2 through LFCH-8, and LFCH-10a,b,c. Groundwater samples will be analyzed for volatile organic compounds, total chromium, hexavalent chromium, sulfate, chloride, boron, pH, temperature, and total dissolved solids. Groundwater monitoring is currently being performed on a quarterly basis.

Chromium concentrations in groundwater have been decreasing over the last five years of groundwater monitoring. The size of the chromium plume is relatively small considering the local groundwater velocity and the amount of time available for the plume to have migrated downgradient from the site. The Chromal Plating Company was in operation until approximately 1960, providing 39 years for hexavalent chromium to reach groundwater and migrate downgradient from the site. We believe this limited plume size can be attributed to natural attenuation processes that convert the mobile and toxic hexavalent form of chromium to the less mobile and nontoxic trivalent form of chromium. Such natural attenuation processes for hexavalent chromium in groundwater have been documented in published research studies (Henderson, 1994; U.S. EPA, 1994; Nyer, 1996; Nyer, 1998).

Our calculations indicate that in 40 years hexavalent chromium would have traveled 4,000 to 8,000 feet based on the apparent groundwater velocity beneath the site. The plume extends only about 200 feet downgradient from the former source area. If natural attenuation processes were not present, the plume would be much longer.

This suggests that natural attenuation processes are preventing downgradient migration of chromium in the groundwater. The elimination of further hexavalent chromium source contributions to the groundwater by the soil remediation recently completed at the site and the continuation of natural attenuation processes should sufficiently mitigate the threat to groundwater quality posed by the existing extent of chromium in groundwater.

Closure for groundwater will be requested based on the results of future groundwater monitoring.

5.0 REFERENCES

Henderson, Thomas. 1994. Geochemical Reduction of Hexavalent Chromium in the Trinity Sand Aquifer. Ground Water, v. 32, pp. 477-486.

Nyer, E. 1996. In Situ Reactive Zones. Ground Water Monitoring and Remediation, Summer.

Nyer, E., F. Lenzo, and J. Burdick. 1998. In Situ Reactive Zones: Dehalogenation of Chlorinated Hydrocarbons. Ground Water Monitoring and Remediation, Spring.

U.S. EPA. 1994. Natural Attenuation of Hexavalent Chromium in Ground Water and Soils. U.S. Environmental Protection Agency. Washington, DC. EPA 540/S-94/505.

TABLES

Table 1:
Analytical Laboratory Results - Confirmation Soil Samples
Former Chromal Plating Company Site
Lawry's California Center

Sample I.D.	Date Sampled	Hex Cr (mg/kg)	STLC Hex Cr (DI Leach) (mg/L)	Total Cr (mg/kg)	TCLP Cr (mg/L)	STLC Cr (mg/L)	Unconfined Compressive Strength 7 day (psi)	28 day (psi)
Area A								
Q51-5'	7/2/99	0.3	<0 10	52.6	<0.050	2.29	105	188
Q51-23'	7/2/99	0.9	<0 10	11.8	0.185	<0.05	---	---
P46-5'	7/6/99	<0.1	<0.10	107	<0.050	5.87	---	---
P46-30'	7/6/99	0.3	<0.10	102	0.054	7.97	---	---
O45-5'	7/8/99	<0.1	<0 10	128	<0.050	10.5	---	---
O45-30'	7/8/99	0 7	<0.10	143	<0.050	13.7	---	---
N50-5'	7/9/99	0.3	<0.10	103	<0.050	10.7	---	---
N50-30'	7/9/99	0 2	<0.10	84.8	<0.050	6.2	127	291
N46-5'	7/10/99	0.3	<0.10	139	<0.050	11.7	---	---
N46-30'	7/10/99	0.3	<0.10	124	<0.050	10.9	---	---
N34-5'	7/13/99	0.4	<0.10	66.7	<0.050	3.55	---	---
N34-30'	7/13/99	0.3	<0.10	72	<0.050	3 36	---	---
M51-5'	7/13/99	0.4	<0.10	56	<0.050	2.31	---	---
M51-30'	7/13/99	0 5	<0.10	59.1	<0.050	2.42	---	---
M41-5'	7/14/99	0.4	<0.10	161	0.078	7.76	---	---
M41-30'	7/14/99	0.3	<0.10	153	0.055	7.76	---	---
L46-5'	7/15/99	0.3	<0.10	126	0.078	7.69	---	---
L46-30'	7/15/99	0.1	<0.10	112	<0.050	5.9	---	---
K45-5'	7/16/99	0 4	<0.10	165	0.087	6.25	---	---
K45-30'	7/16/99	0 5	<0.10	144	0 074	5.24	---	---
J52-5'	7/19/99	0 4	<0.10	64 4	<0 050	4.27	---	---
J52-30'	7/19/99	0.3	<0.10	116	0.055	5.54	---	---
I49-5'	7/20/99	0.3	<0.10	53.1	<0.050	4.55	---	---
I49-30'	7/20/99	0.3	<0.10	85.5	<0.050	6 52	---	---
Cleanup Criteria		**10**	**1**	**---**	**5**	**560**	**7**	**14**

Table 1:
Analytical Laboratory Results - Confirmation Soil Samples
Former Chromal Plating Company Site
Lawry's California Center

Sample I.D.	Date Sampled	Hex Cr (mg/kg)	STLC Hex Cr (DI Leach) (mg/L)	Total Cr (mg/kg)	TCLP Cr (mg/L)	STLC Cr (mg/L)	Unconfined Compressive Strength 7 day (psi)	28 day (psi)
Areas B & C								
P16-5'	7/26/99	0.2	<0.10	35.4	<0.050	3.59	65	144
O13-5'	7/26/99	0 3	<0.10	71.7	<0.050	6.45	---	---
N20-5'	7/27/99	0.3	<0.10	80.9	<0 050	7.63	---	---
M17-5'	7/27/99	0 3	<0.10	62.0	<0.050	6.18	---	---
M17-30'	7/27/99	0.5	<0.10	80.9	<0 050	7 98	---	---
M9-5'	7/28/99	0 2	<0.10	70.7	<0.050	2.83	---	---
L36-5'	7/28/99	0.3	<0.10	53.0	<0.050	4.24	---	---
L36-30'	7/28/99	0.2	<0.10	68.2	<0.050	2.64	---	---
L14-5'	7/29/99	1.7	0.23	594	0.229	18.7	---	---
K31-5'	7/29/99	1 5	0.20	564	0.145	16.9	---	---
K31-30'	7/29/99	0.2	<0.10	166	<0.050	3.64	---	---
K21-5'	7/30/99	1 2	0.17	463	0.126	23.4	---	---
K21-30'	7/30/99	0 8	<0 10	466	0.094	28.0	---	---
K9-5'	7/30/99	0 8	<0.10	339	0.142	24.5	---	---
J4-5'	8/2/99	<0.1	<0.10	49.7	<0.050	3.15	---	---
I39-5'	8/2/99	0 3	<0.10	57.4	<0.050	3.08	---	---
I39-30'	8/2/99	0 3	<0.10	47.9	<0 050	3.35	---	---
I23-5'	8/3/99	1.9	0.37	609	0.116	33.6	---	---
I23-30'	8/3/99	1.2	<0.10	659	0 069	35.1	---	---
I11-5'	8/3/99	<0 1	<0.10	568	<0.050	33.7	---	---
H44-5'	8/4/99	0.5	<0.10	214	<0.050	36.0	---	---
H44-30'	8/4/99	<0.1	0.10	577	0.055	37.3	---	---
H30-5'	8/4/99	<0.1	0.10	620	<0 050	39.9	---	---
H30-30'	8/4/99	1.1	0.15	717	<0.050	41.0	---	---
A43-5'	8/5/99	0.4	<0.10	336	0.128	25.5	---	---
A43-30'	8/5/99	0.2	0.10	297	0.123	27.6	---	---
A23-5'	8/5/99	0.4	<0 10	329	0.081	9.85	---	---
B36-5'	8/9/99	0.1	<0.10	314	0.121	8.05	---	---
B36-30'	8/9/99	<0.1	<0.10	264	0.086	12.4	---	---
Cleanup Criteria		**10**	**1**	**---**	**5**	**560**	**7**	**14**

Table 1:
Analytical Laboratory Results - Confirmation Soil Samples
Former Chromal Plating Company Site
Lawry's California Center

Sample I.D.	Date Sampled	Hex Cr (mg/kg)	STLC Hex Cr (DI Leach) (mg/L)	Total Cr (mg/kg)	TCLP Cr (mg/L)	STLC Cr (mg/L)	Unconfined Compressive Strength 7 day (psi)	28 day (psi)
Areas B & C								
B28-5'	8/9/99	<0.1	<0.10	262	0.082	28.0	---	---
B14-5'	8/10/99	0.1	<0.10	380	0.052	24.5	---	---
C45-5'	8/10/99	0.2	<0.10	240	0.055	30.9	---	---
C45-30'	8/10/99	0.2	<0.10	253	0 100	21.9	---	---
D38-5'	8/11/99	0.1	<0.10	337	0.073	33.3	---	---
D38-30'	8/11/99	0.1	<0 10	253	0.082	26.8	---	---
D22-5'	8/11/99	0.2	<0.10	272	0.079	22.8	---	---
D10-5'	8/12/99	1.5	0.21	633	<0 050	38.5	---	---
E43-5'	8/12/99	1.7	0.23	620	<0.050	43.7	---	---
E43-30'	8/12/99	1 1	0.14	363	<0.050	38.3	---	---
E27-5'	8/16/99	0.2	<0.10	59.7	<0.050	5.01	---	---
E27-30'	8/16/99	0.2	<0.10	61 7	<0 050	4.54	---	---
E17-5'	8/16/99	0.2	<0.10	92.7	0.073	4.45	---	---
F32-5'	8/17/99	1.1	0 16	426	<0.050	28.5	---	---
F32-30'	8/17/99	1 3	0.15	408	<0.050	30.9	---	---
F12-5'	8/17/99	1.0	0.16	323	<0.050	29.3	---	---
G17-5'	8/18/99	0.6	0.13	477	<0 050	32.5	---	---
G17-30'	8/18/99	0.7	0.20	519	<0.050	28.1	---	---
G5-5'	8/18/99	0 5	0.17	466	0.072	30.3	---	---
G41-5'	8/19/99	0.6	0.19	437	<0.050	39.2	---	---
G41-30'	8/19/99	0.9	0.21	436	0.078	38.5	---	---
Cleanup Criteria		**10**	**1**	**---**	**5**	**560**	**7**	**14**

Notes:

Hex Cr = hexavalent chromium
Total Cr = total chromium
STLC = soluble threshold limit concentration
DI Leach = Modified California Waste Extraction Test using deionized water
TCLP = Toxicity Characteristic Leaching Procedure

psi = pounds per square inch
mg/kg = milligrams per kilogram
mg/l = milligrams per liter

QA/QC

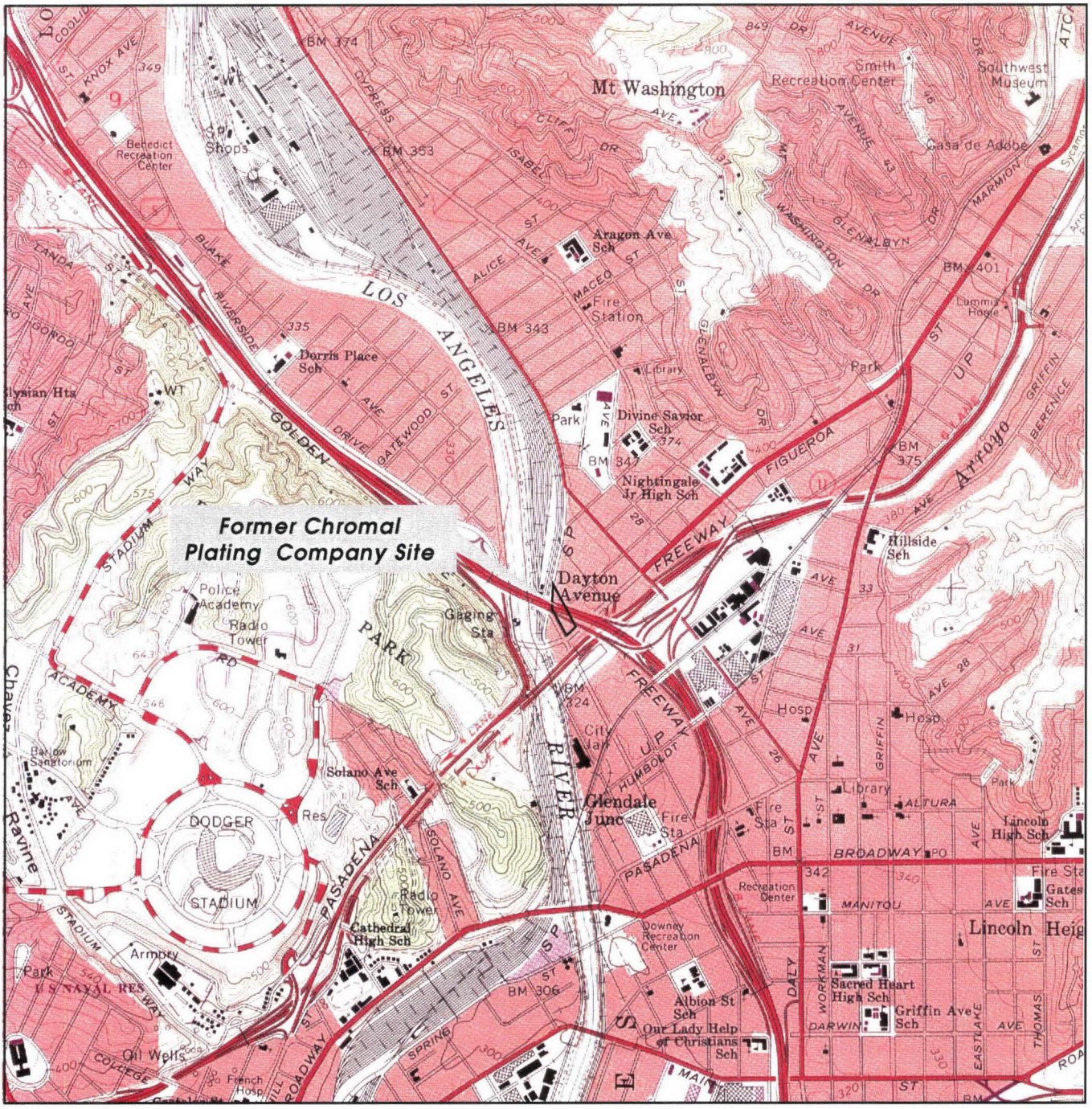
Table 2:
Laboratory Analytical Results - Overburden Stockpile Samples
Former Chromal Plating Company Site
Lawrys California Center

Sample I.D.	Date Sampled	Hex Cr (mg/kg)	STLC Hex Cr (DI Leach) (mg/L)	Total Cr (mg/kg)	TCLP Cr (mg/L)	STLC Cr (mg/L)
Overburden (Area A) Stockpile Samples						
OB1	7/1/99	0.5	<0.10	32.4	0.060	1.87
OB2	7/1/99	0.7	<0.10	44.0	0.113	2.33
OB3	7/1/99	0.9	0.12	49.4	0.152	0.079
OB4	7/1/99	0.3	<0.10	34.0	0.122	0.091
OB5	7/1/99	0.8	0.15	42.1	0.109	0.062
OB6	7/1/99	1.0	<0.10	36.1	0.092	3.11
Asphalt/Soil Stockpile						
ASPHALT-72699	7/26/99	<0.1	<0.10	79.3	<0.050	1.33

Notes:
Hex Cr = hexavalent chromium
Total Cr = total chromium
TCLP = Toxicity Characteristic Leaching Procedure
STLC = soluble threshold limit concentration
DI Leach = Modified California Waste Extraction Test using deionized water

QA/QC

FIGURES



MAP SOURCE: U.S.G.S Topographic Map, 7.5' Quadrangle, Los Angeles, California, 1981.

6257-30 031299SJO/scj

Former Chromal Plating Company Site

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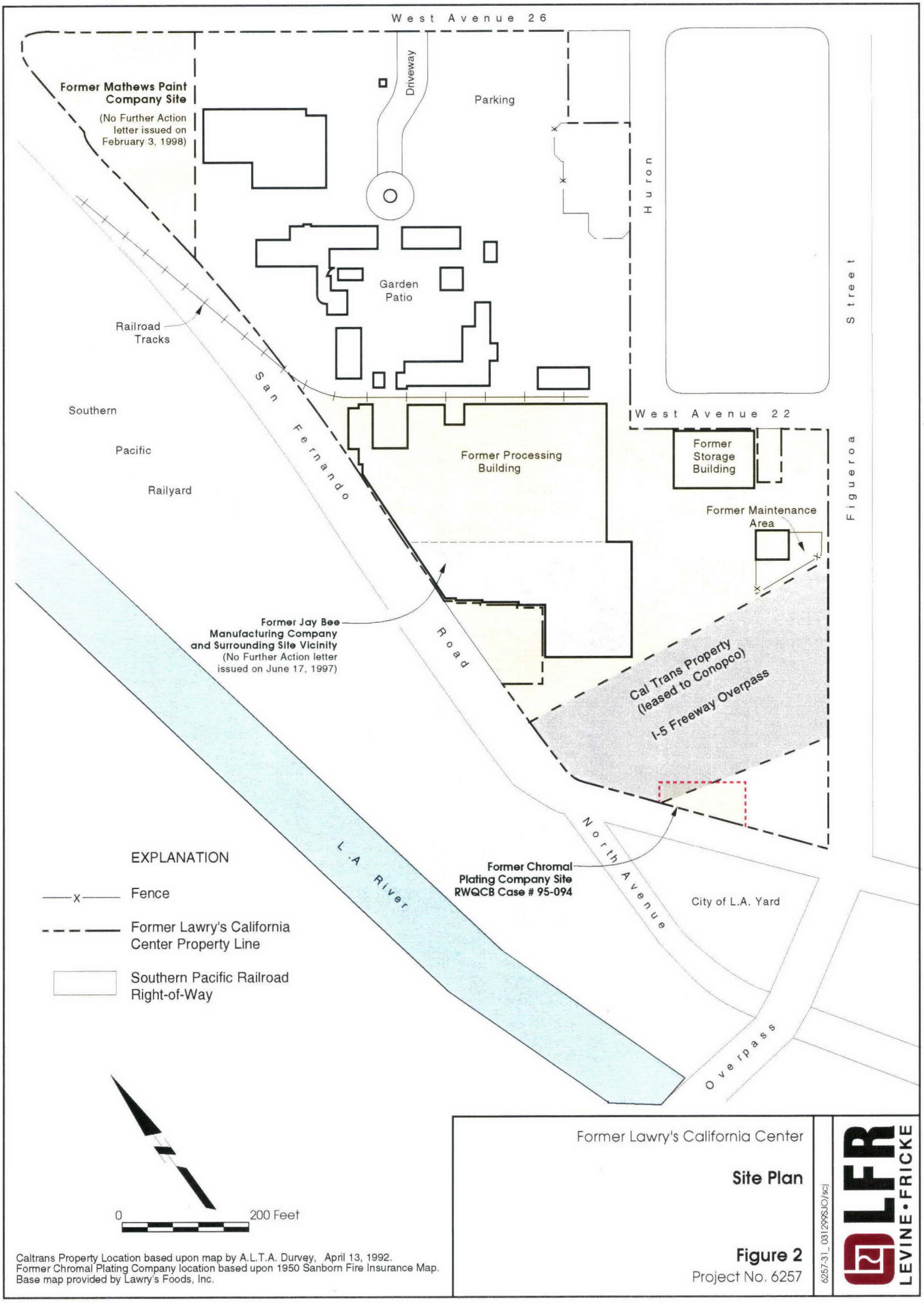
Site Vicinity

Figure 1

Project No. 6257



Caltrans Property Location based upon map by A.L.T.A. Durvey, April 13, 1992.
Former Chromal Plating Company location based upon 1950 Sanborn Fire Insurance Map.
Base map provided by Lawry's Foods, Inc.

Former Lawry's California Center

Site Plan

Figure 2
Project No. 6257

6257-31_031299SJO(sc)

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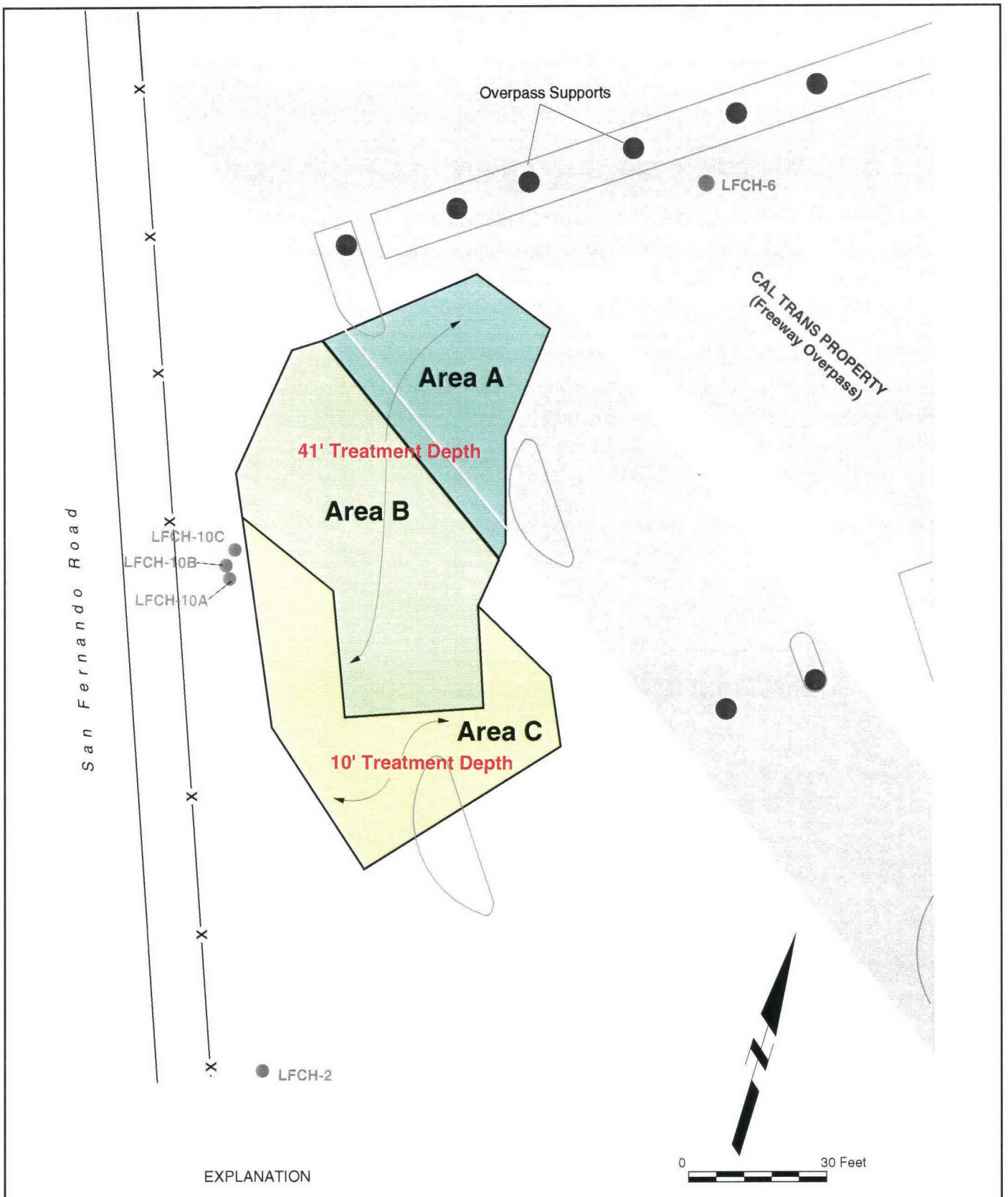

SOURCE: Calvada Surveying, Inc., August 1997 & February 1999.

Lawry's California Center

Site Plan Showing
Extent of In Situ Stabilization
Former Chromal Plating Site
Los Angeles, California

Figure 3
Project No. 6257

6257-35 092999JSR/meg

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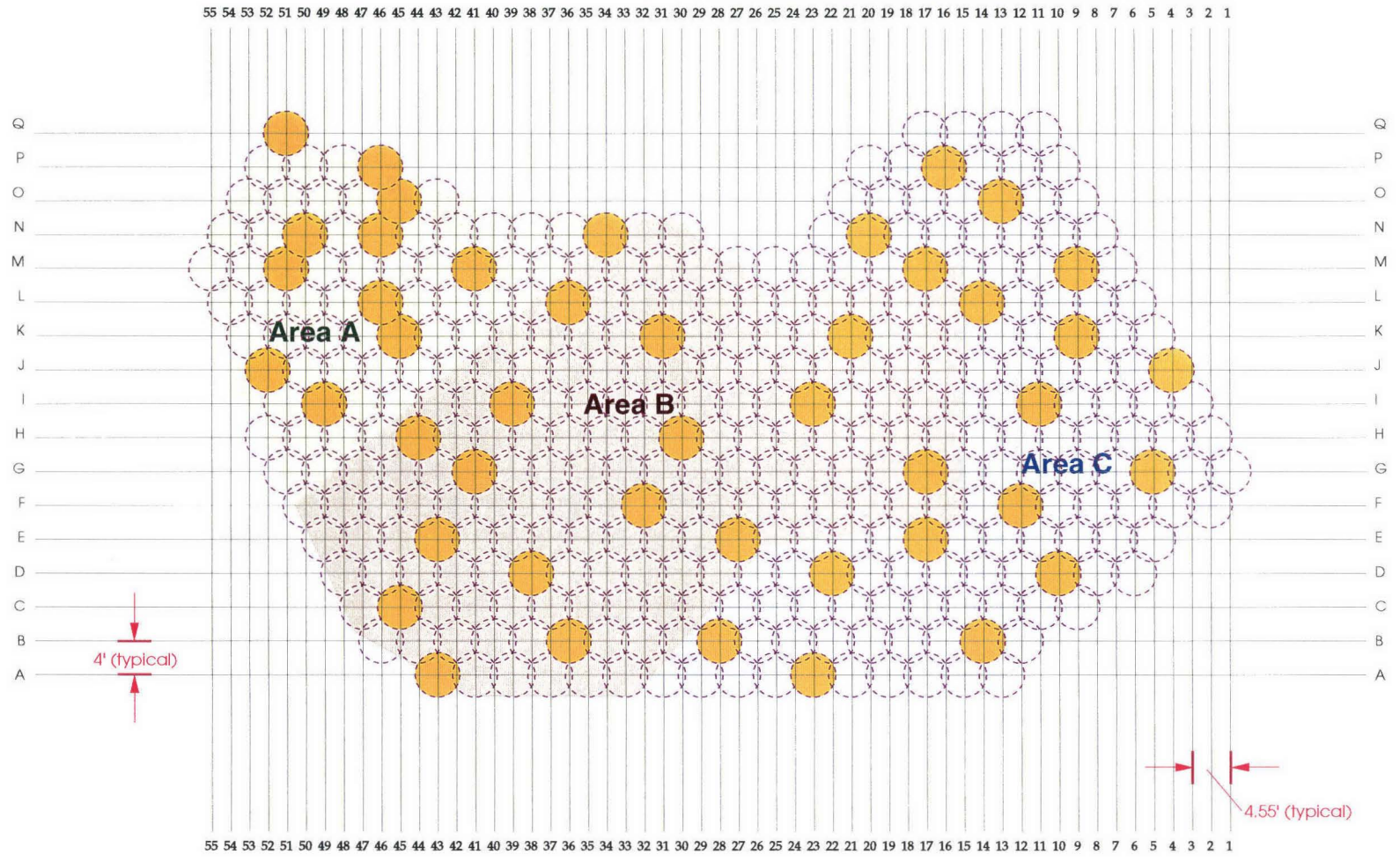

Not to Scale

EXPLANATION

In Situ Soil Mixing Borings

Confirmation Soil Samples Collected from Borings at 5 and 30 feet below grade in Areas A and B and at 5 feet below grade in Area C

6257-36 _ 101499JSR. ryk

Lawry's Chromal

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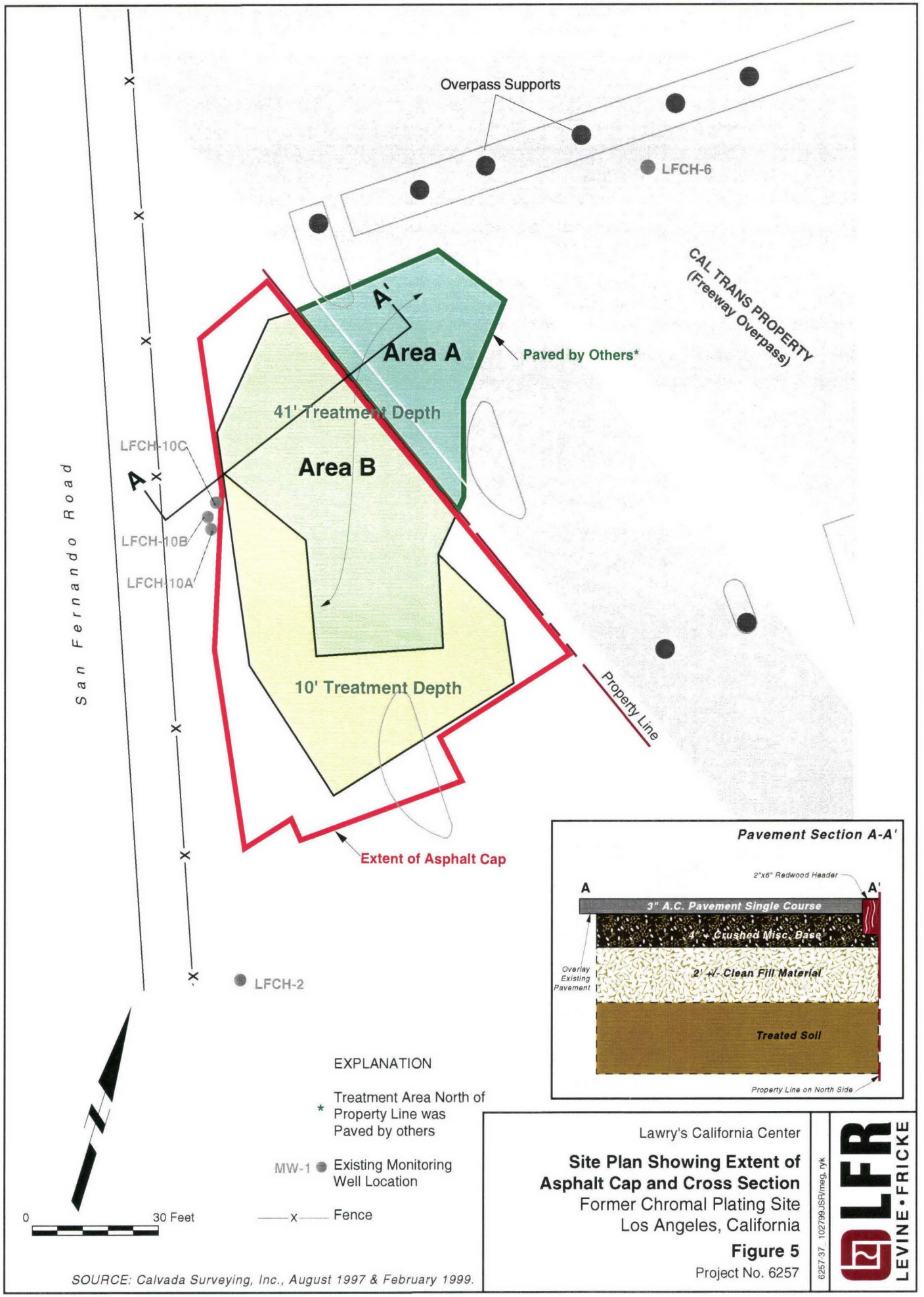
Confirmation Soil Sample Location Map

Figure 4
Project No. 6257



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Site Plan Showing Extent of Asphalt Cap and Cross Section

Former Chromal Plating Site
Los Angeles, California

Figure 5

Project No. 6257

6257-37 102799.JSR/meg, nyk

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